Urban Resolve 2015

By Sharon Anderson

A rich experimentation environment replicated a Joint Task Force (JTF) headquarters in a multifaceted experiment led by U.S. Joint Forces Command. Set in 2015, Urban Resolve's purpose is to guide the development of critical warfighting capabilities for the future joint force commander, with a particular focus on those needed for effective urban operations and the security of an urban population.

Since World War II, U.S. forces have sought to avoid operations in major urban areas to minimize the costly damage in both lives and property expected inside cities. But according to USJFCOM, the explosive growth of the world's major urban centers, changes in enemy strategies, and the global war on terrorism have made the urban battlespace potentially decisive and practically unavoidable.

To prepare for both the current and future challenges, 13 participating nations engaged in the experiment with modeling and simulation (M&S) and scenarios developed and executed by USJFCOM's Joint Innovation and Experimentation (JI&E) Directorate (J9).

Applications for Modeling and Simulation

Urban Resolve assists in aggressively advancing the development of the M&S systems needed for urban warfighter training. But the benefits from M&S are not limited to warfighting. According to Urban Resolve 2015 experiment director Army Col. Michael Postma, USJFCOM works with multinational and interagency partners worldwide to examine solutions ranging from rapid recovery in the aftermath of a tsunami, to how to successfully stabilize and reconstruct a war-torn nation.

According to J9 Director Rear Adm. James A. Winnefeld, there is great potential for these powerful M&S tools, particularly when networked.

"We have this wonderful Defense Research and Engineering Network (DREN) which is an extremely high bandwidth network for computer simulations across the country. If you are Virginia Gov. Tim Kaine and you have a new emergency operations center that you want to test and train to, theoretically, you can hook into this DREN network and we can run a simulation here for you to test your processes and train your people to handle emergencies."

The M&S tools can allow users to look at alternate courses of action in a natural disaster, Winnefeld said, and they have application in homeland defense.

"If you are eight feet under water and have lost the Hampton Roads Tunnel, what kind of evacuation routes do you need? What kind of relief efforts? What is the economic impact and so on?"

JFCOM will be engaging in an Urban Resolve homeland defense exercise, which is expected to be led by the Department of Homeland Security and U.S. Northern Command. According to Winnefeld, USJFCOM will partner with them to help run the experiments.

The Synthetic Environment for Analysis and Simulation (SEAS) is an integral part of the M&S tools. It provides insights as to how

Sept. 20, 2006 – J9 Director Rear Adm. James A. Winnefeld in USJFCOM's Joint Futures Lab explaining the significance of Urban Resolve 2015 for conducting effective urban operations.

populations might respond to actions taken against the political, military, economic, social, infrastructure and information (PMESII) foundations of their countries.

"SEAS gave us valuable input into how well a plan was executed based upon population behaviors," Postma said. "It helped us to determine the effectiveness of courses of action especially in the areas of long range diplomatic, information, military and economic conditions which are oftentimes difficult to measure."

Other tools, capabilities and potential solutions to assist warfighters during the experiment included the Army's Joint-Command Post of the Future; the Joint Force Information Component Command; Integrated Chemical Biological Radiological and Nuclear Defense; the Tele-Engineering Kit; and the Tele-Engineering Ops Center.

Urban Resolve Participants

Urban Resolve 2015 included the joint, coalition and U.S. government and nongovernment organizations that a JTF staff would routinely collaborate with in conducting military operations or providing humanitarian assistance.

Over the course of the three-phase experiment about 1,200 participants were distributed across 18 sites across the country, including USJFCOM, Special Operations Command, the Joint Staff, the Institute for Defense Analysis, Defense Threat Reduction Agency, Defense Advanced Research Projects Agency, the services, and other U.S. and multinational agencies.

Foreign liaison officers, German Air Force Lt. Col. Ralf Gosch and Republic of Korea Air Force Col. Byungjin Park discussed the importance of approaching problems from multicultural perspectives and operational experiences. U.S. Air Force Col. Bill Coburn agreed that working in a coalition environment has produced important — and sometimes surprising results.

"What's amazing is that in discussing problems someone will bring up something that no one else had thought of because of their unique views. It's not that someone is right or that someone is wrong; it's that working together provides so much value to what we are doing," Coburn said.

Setting the Stage

The scenario involved a U.S.-led coalition force that must confront and overcome a skilled adversary who is equipped with modern capabilities and is operating in an urban environment.

The urban environment is crowded and complicated with many variables that must be analyzed to develop doctrine and strategies. USJFCOM personnel developed the concept of how they think joint urban operations will be conducted in the future.

According to Winnefeld, the concept deals with the entire spectrum of conflict — all the way from guerrilla warfare, to counterinsurgency — to major combat operations. The concept examines isolating and controlling an insurgency.

Retired U.S. Army Maj. Gen. Larry Budge is refining the concept. According to Budge, the chief factors for success in this kind of scenario are ensuring the security of the population and winning the intelligence war.

"In a counterinsurgency one of the fundamental facts is that the population is the center of gravity. The vast majority of the people are probably on the fence. They do not support the bad guys, but they probably do not support the good guys either. You have to focus on this population, get them off the fence and on your side.

"Another factor is that you have to provide security for this population. No matter how much they are in favor of you, they are not going to help you if it means they are going to be killed the next day. Security is one of the major factors in addition to controlling the population," Budge said.

Added to this complexity is that insurgents are embedded in the general population, which makes them difficult to find. Superior intelligence is needed to find them — without endangering the general population.

"The third big principle of isolate and control for counterinsurgency is to win the intelligence fight — to get more information on the enemy than he can get on us — and use it to root him out of the population. You have to be careful. If you kill or injure the population while you are routing out this adversary, you are going to cause more people to be recruited by the insurgency," Budge said.

There are many aspects to information superiority in this volatile environment. Keeping people informed is essential to securing their trust. In this regard, Integrated CBRN, Chemical, Biological, Radiological, Nuclear, tested countering a potential weapons-of-mass-destruction threat in a future environment.

"The information superiority piece is much more than trying to get the story out. If there is a chemical released, you can put out information that will reassure the population and let them understand what is going on. By telling them where the most dangerous places are; the symptoms and what they should do; why they see people walking around with funny suits on; and why they should not panic — could maintain stability. If you do not do this, you will end up with a panicked population," Winnefeld said.

The "white cell" or experiment controllers for Urban Resolve 2015.

Why Experiment?

Experimentation is the military's primary method for exploring, testing and validating warfighting ideas and concepts. Using M&S technology is significantly less expensive than the costs associated with live experimentation where equipment, infrastructure and personnel must be deployed and recovered after the experiment concludes. The virtual battlespace also eliminates wear-and-tear on people and equipment that would be needed to establish an operational theater.

Although some advanced technologies were used, such as laser technology by the U.S. Air Force and unmanned vehicles by the Navy and Army; the experiment wasn't really about technologies — or winning or losing, according to USJFCOM. What is important is testing concepts and doctrine.

"In a counterinsurgency operation in an urban environment decisions were made about what kind of forces are going to be used? What would be the role of air power versus the role of ground forces? How do we conduct ISR – intelligence, surveillance and reconnaissance?" Winnefeld said.

Combatant commanders and the services are anxious to fill capability gaps so Winnefeld discussed the expected outcomes of Urban Resolve.

"Two things come out of experiments like this — concepts, it either worked or it did not work, and material solutions that worked or did not work. We shoot the losers and get them out. Then we try to transition the winners on both of those things."

If it is a concept that worked, it can be immediately put into doctrine and into the training environment, according to Winnefeld.

"With material solutions it is a lot more challenging because there is money involved and you have to persuade someone to buy this — and they are already busy buying other things. There is a natural progression from the need that the person on the ground has — the gaps they are trying to fill — and our ability to experiment and find solutions.

"Finding solutions is not the easiest thing in the world. Then we must have the courage to throw the bad ones out and keep the good ones and transition them into the active forces." CHIPS